

ABSTRACTA BALUN AND A MIXER AND DOWNCONVERTERINCORPORATING SAME

A balun comprises seven adjacently disposed coupled lines in a substantially symmetrical arrangement about a central one (33) of the seven lines. Corresponding first ends of the two outermost lines (30, 36), of the two thereto adjacent lines (31, 35) and of the central line are connected to each other and to an unbalanced port input (37) (Port 1). Corresponding first ends of the two lines (32, 34) adjacent the central line (33) are grounded, as are corresponding second ends of the central line (33) and of the two lines (31, 35) adjacent the outermost lines. Corresponding second ends of the outermost line (30) on one side of the central line (33) and the next but one line (32) on that same side form a first balanced port (Port 2), while equivalent second ends on the other side of the central line (33) form a second balanced port (Port 3). The balun may form part of a single-sideband mixer or of a downconverter.

(Figure 3)

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